

**High-Demand Career Fields for the Arkansas Technical Careers
Student Loan Forgiveness Program
2005-2006**

Career Fields Related to Advanced Manufacturing

This area is a cluster of occupations and positions held by people involved in the maintenance, installation, repair, and production of products produced by Arkansas' advanced manufacturing companies, plants, and industries. People in these high-demand occupations are required to possess a solid foundation in mathematics and science and typically include maintenance repairers; industrial mechanics; maintenance personnel; machinists for computer-assisted production and manufacturing and industrial engineers; and engineering technicians.

Programs that prepare individuals to work in these high-demand occupations typically fall in these selected Classification of Instructional Programs (CIP) categories: 14-Engineering and 15-Engineering Technology, as well as selected programs in category 47-Mechanics and Repairers (e.g., 47.0105, Industrial Electronics Installers and Repairers) and category 48-Precision Production Trades (e.g., 48.0501, Machinist & Machine Technologies and 48.0508, Tool and Die Maker & Technologist).

Career Fields Related to Computer/Information Technology

This area is a cluster of occupations and positions held by people who build, install, or maintain computers, computer systems, and networks as well as write, install, and maintain computer software. People in these high-demand occupations are required to possess a solid foundation in mathematics and science and typically include systems analysts, computer engineers and technicians, database administrators, computer support specialists, etc.

Programs that prepare individuals to work in these high-demand occupations typically fall in these selected CIP categories: 14-Engineering (e.g., 14.09, Computer Engineering), and 15-Mechanics and Repairers (e.g., 15.03, Electrical and Electronic Engineering-Related Technology and 15.04, Electromechanical Instrumentation and Maintenance Technology) as well as category 11-Computer and Information Sciences. Selected programs in category 47-Engineering Technology (e.g., 47.104, Computer Installer and Repairer) are also related to this high-demand occupation.

Career Fields Related to Biomedical/Biotechnology

This area is a cluster of occupations and positions held by people who apply engineering and science to medical equipment and research. Backgrounds for people working in these occupations usually include some branch of engineering or applied science. Electromedical and biomedical repairers are examples of occupations and positions related to biomedical/biotechnology.

Programs that prepare individuals to work in these high-demand occupations typically include selected programs related to these CIP categories: 26-Biological Sciences & Life Sciences, 40-Physical Sciences, 41-Science Technologies, and 51-Health Professions and Related Sciences. Selected programs in category 14-Engineering (e.g., Bioengineering and Biomedical Engineering), 15-Engineering Technology (e.g., 15.0401, Biomedical Engineering-Related Technology & Technician) are also included in this career field.